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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/781,385

Applicant(s)

RUHR ET AL.

Examiner

Amy T. Lang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,9-30,35,36,38-49,51,56-58,64-67,69 and 70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,9-30,35,36,38-49,51,56-58,64-67,69 and 70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

#### ***Priority***

1. The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 10/294,851, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Specifically, claims 1, 30, 44, 57, and 67 of the instant application recite a propoxylated alcohol, which is not present in Application No. 10/294,851. Therefore claims 1, 30, 44, 57, and 67 and all claims that depend from these claims (claims 1-70) do not receive the earlier priority date of Application No. 10/924,851.

#### ***Response to Arguments***

2. Applicant's arguments filed 4/19/2007 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the instant specification and

Declaration filed 4/19/2007 provide criticality for a lubricating composition comprising an ether carboxylate and a propoxylated alcohol that would overcome the prior art rejection mailed 2/20/2007.

With respect to argument (A), it is the examiner's position that the instant specification and Declaration do not provide criticality to overcome the prior art.

Firstly, the instant specification provides criticality for the composition comprising an oleyl ether carboxylate and a C<sub>9</sub>-C<sub>11</sub> propoxylated alcohol. The instant independent claims 1, 44, 57, and 67 only disclose a broad ether carboxylate with the propoxylated alcohol. Therefore, the instant specification does not provide criticality for these independent claims since the ether carboxylate is broadly claimed and not narrowly defined as in the examples of the specification. Claims 3, 4, 9-29, 45-48, 51, 56, 64-66, 69, and 70, which depend from the above listed independent claims, do not further define the ether carboxylate as an oleyl ether carboxylate and therefore are also not supported by the criticality in the instant specification.

Furthermore, the examples in the instant specification utilize an oleyl ether carboxylate as the disclosed ether carboxylate. However, the instant claims 2, 30, 35, 36, 38-43, 49, and 58 teach the ether carboxylate with the formula R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OCH<sub>2</sub>COO-X. It is the examiner's position that an oleyl ether carboxylate, as utilized in the instant specification, is narrowly defined while the instantly claimed ether carboxylate comprising the above formula is broader. Therefore, the instant specification does not provide criticality for the broadly defined ether carboxylate in claims 2, 30, 35, 36, 38-43, 49, and 58.

Thirdly, the Declaration is insufficient to overcome the prior art by providing criticality for the claimed composition since it does not compare the closest prior art of Abe (WO 2004/037960 A1). The instant specification and Declaration utilize a composition comprising an oleyl ether carboxylate to show an improved foam reduction in conveyor lubricants. However, Abe utilizes an oleic ether carboxylate to also show an improved foam reduction in conveyor lubricants (see page 1, lines 5-10; page 10, lines 3-6; Examples 1, 2 of Abe). In order to overcome the rejection the declaration must compare the claimed subject matter with the closest prior art to be effective to rebut a *prima facie* case of obviousness (*In re Burckel*, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979)). Since the instant Declaration does not compare the claimed ether carboxylate with the closest prior art of Abe, it is insufficient to overcome the rejection.

Lastly, Comparative Example L with Example 1 is used to provide criticality for the combination of an oleyl ether carboxylate with a C<sub>9</sub>-C<sub>11</sub> propoxylated alcohol. However, Comparative Example L contains a C<sub>8</sub>-C<sub>10</sub> alkoxyated alcohol, where alkoxyated includes both ethoxyated and propoxylated alcohols (see page 13, lines 8-10 of the Remarks filed 4/19/2007). Therefore, it is the examiner's position that a C<sub>8</sub>-C<sub>10</sub> alkoxyated alcohol comprises both a C<sub>9</sub> and a C<sub>10</sub> propoxylated alcohol since alkoxyated contains propoxylated alcohols. Therefore, Comparative Example L comprises the same components as Example 1 and is not sufficient as a comparative example to provide criticality.

Therefore, it is the examiner's position that the instant specification and Declaration do not provide criticality for the instantly claimed ether carboxylate and propoxylated.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-4, 9-13, 15-18, 26-30, 35, 36, 38-40, 42-49, 51, 57, 58, 64, 66, 67, and 69** are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1) and further in view of Zeman (US 6,458,343 B1).

Abe discloses an aqueous conveyor lubricant comprised of ether carboxylates (page 1, lines 5-10; page 5, lines 34-35). The average degree of ethoxylation of the ether carboxylates is disclosed from 0.3 to 15 (page 4, lines 23-28). The ether

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carboxylates are further disclosed as having the formula  $R-(OCH_2CH_2)_n-OCH_2COO-X$ , where R is an alkyl group having 12 to 22 , preferably 16 to 18, carbon atoms, n is from 0.3 to 15, and X is hydrogen (page 4, line 30 through page 5, line 7). Therefore, this formula disclosed by Abe clearly overlaps the instantly claimed ether carboxylate. Abe also teaches that X may be sodium or potassium, which are alkali metals, when describing how the ether carboxylates useful in the invention are produced (page 5, lines 16-32).

The lubricant composition comprises the ether carboxylates in an amount from 0.1 to 30 wt%, preferably 1 to 20 wt% (page 6, lines 1-6). Abe also discloses additives in the lubricating composition including a foam inhibitor, a corrosion inhibitor, biocides, which encompasses antimicrobial agents, and surfactants (page 6, lines 8-14). The total lubricating composition is diluted with water to a concentrate of 0.01 to 2 wt% (page 6, lines 20-27).

The lubricant composition disclosed by Abe is used to lubricate a belt conveyor, equipped with a sprayer system (page 1, lines 14-18). The continuous spraying of the conveyor belt with the disclosed lubricant teaches a method of lubricating a conveyor system (page 8, lines 1-3). Since the conveyor belt is continuously sprayed, it intrinsically has a plurality of spray nozzles along the conveyor system.

Abe does not specifically disclose the specific surfactants utilized in the lubricating composition.

Li also discloses a lubricant for conveyor systems (column 1, lines 8-12). This composition is further disclosed as containing a surfactant to increase detergency and

lubricity (column 6, lines 59-67). Suitable surfactants include alkoxylated alcohols having 8 to 24 carbon atoms (column 7, lines 18-25). Although Li teaches that ethoxylated alcohols are preferred, the disclosure of the invention is broad enough to encompass propoxylated alcohols.

Since Abe is silent as to the specific surfactants utilized in the conveyor lubricant composition and Li discloses that C<sub>8</sub> to C<sub>24</sub> alkoxylated alcohols are advantageous by providing increased detergency and lubricity, it would have been obvious for Abe to also utilize the surfactants disclosed by Li.

Furthermore, Zeman teaches that alkoxylated alcohols are typical and commonly known antifoaming agents (column 41, lines 27-29). Since the instant specification and Declaration do not provide criticality for the two components instantly claimed (see Response to Arguments above), it would have been obvious to one of ordinary skill at the time of the invention for Abe to utilize an alkoxylated alcohol, which encompasses propoxylated alcohols, for the advantageous and commonly known antifoaming characteristics disclosed by Zeman.

6. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1), further in view of Zeman (US 6,458,343 B1), and further in view of Behler (US 4,894,485).

The combination of Abe, Li, and Zeman, as discussed in paragraph 5 and incorporated here by reference, discloses a conveyor lubricant comprised of ether carboxylates with 0.3 to 15 moles of ethoxylation.



The combination of Abe, Li, and Zeman does not disclose the mixture of using both ether carboxylates that are ethoxylated and propoxylated.

Behler discloses an ether carboxylate formed by ethylene oxide or propylene oxide or by the mixture of ethylene oxide and propylene oxide (column 2, lines 23-61). This corresponds to the ether carboxylate as being ethoxylated, propoxylated, or both. Therefore, Behler teaches the mixture of both ethoxylated and propoxylated ether carboxylates.

Since Abe discloses ethoxylated ether carboxylates, each from 0.3 to 15 moles, and Behler teaches that it is known in the art to combine ethoxylated and propoxylated ether carboxylates in a mixture, it therefore would have been obvious for Abe to use a combination of the two in the lubricating composition. Furthermore, since Abe independently teaches the mole range of each from 0.3 to 15, it would have been obvious for Abe to also use the combination with 5 moles of ethoxylated ether carboxylates and 2 to 10 moles propoxylated ether carboxylates.

7. **Claims 19-24, 41, 56, 65, and 70** are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1), further in view of Zeman (US 6,458,343 B1), and in further in view of Person Hei (US 5,723,418).

The combination of Abe, Li, and Zeman, as discussed in paragraph 5 and incorporated here by reference, discloses a conveyor lubricant comprised of ether carboxylates and additional additives.

Abe does not specifically disclose (i) an ether amine or diamine additive or (ii) a dicarboxylic acid corrosion inhibitor in the lubricating composition.

With respect to (i) above, Person Hei discloses a lubricating composition for use on conveyor systems (column 1, lines 6-18). The composition comprises an amine compound of formula  $R_1-O-R_2-NH_2$  or  $R_1-O-NH-R_3-NH_2$ , where  $R_1$  is a linear  $C_6-C_{18}$ ,  $R_2$  is a linear  $C_1-C_8$  alkyl, and  $R_3$  is a linear or branched  $C_1-C_8$  alkyl group (column 2, lines 14-26). Either compound, when utilized in a conveyor lubricant, is shown to provide lubricity, antimicrobial character, and reduction in formation of precipitates (column 2, lines 60-67). Person Hei also discloses the ether amine as a mixture of tetradecyloxypropyl-1,3-diamino propane and dodecyloxypropyl-1, 3-diaminopropane utilized in the conveyor lubricant (Table 3, column 7, where  $C_{12}$  overlaps dodecyl). When the lubricant comprising this compound was subjected to a mild steel corrosion inhibition test, no visible signs of corrosion were produced (column 7, lines 24-50). Therefore, this compound is advantageous to a conveyor lubricating composition.

Since the scope of Abe is open to various additives and Person Hei discloses an amine additive with many advantages in a conveyor lubricant, it would have been obvious for Abe to also utilize the amines disclosed by Person Hei. Furthermore, although Person Hei does not specifically disclose the amines as a corrosion inhibitor, they would intrinsically act as one in a lubricating composition.

With respect to (ii) above, Person Hei discloses a dicarboxylic acid corrosion inhibitor, specifically adipic or glutaric, which overlap the instantly claimed formula (column 4, lines 18-21). These specific corrosion inhibitors, when utilized in a conveyor

lubricant, were shown to provide corrosion protection against mild steel and acted as an amine neutralizing agent to benefit production cost and efficiency (column 8, lines 5-29). Therefore, since Abe is silent as to the specific corrosion inhibitor and Person Hei discloses a specific corrosion inhibitor with various advantages in a conveyor lubricant, it would have been obvious for Abe to also utilize the dicarboxylic acid corrosion inhibitor.

8. **Claim 25** is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (WO 2004/037960 A1) in view of Li (US 6,214,777 B1), further in view of Zeman (US 6,458,343 B1), further in view of Person Hei (US 5,723,418), and further in view of Login (US 4,395,373).

The combination of Abe, Li, Zeman, and Person Hei, as discussed in paragraph 7 and incorporated here by reference, disclose a conveyor lubricant comprised of ether carboxylates. Other additives are included in the composition including corrosion inhibitors, foaming agents, and chelating agents (page 6, lines 8-14 of Abe).

Abe is silent as to the specific additives utilized in the lubricant composition, Login discloses that phosphated amine oxides can be used as corrosion inhibitors, foaming agents, and chelating agents (column 9, lines 15-22). Therefore, since Abe is silent as to the specific additives and Login discloses one compound that can be used for the various additives disclosed by Abe, it would have been obvious for Abe to utilize the phosphated amine oxide in the lubricant composition in order to provide the disclosed corrosion inhibition, antifoam production, and chelating effects.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy T. Lang whose telephone number is 571-272-9057. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/11/2007

*ML*

  
**LOAN H. THANH**  
**PRIMARY EXAMINER**